

# THE WORLD OF LAPP

Solutions for Building Infrastructure



# legend

## Industries



## Product characteristics



### Please note:

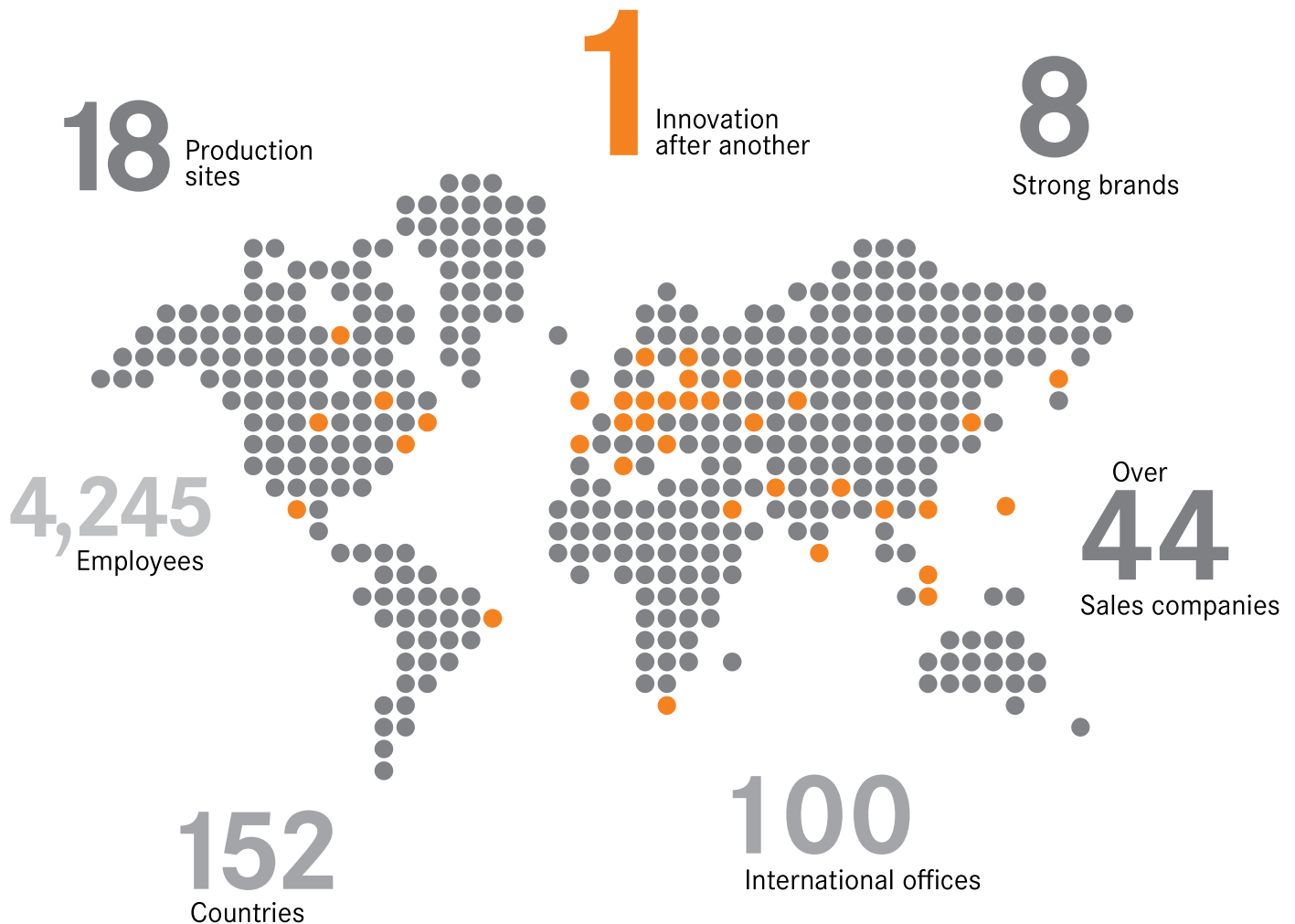
The purpose of the icons is to provide you with a quick overview and a rough indication of the product features to which the corresponding information relates. You can find details of product characteristics in the “technical data” sections on the product pages.

# RELIABLY CONNECTING THE WORLD

Headquartered in Stuttgart, Germany, LAPP is a leading supplier of integrated solutions and branded products in the field of cable and connection technology. LAPP's portfolio includes standard and highly flexible cables, industrial connectors, customised system solutions, automation technology and robotics solutions for the intelligent factory of the future, as well as technical accessories.

With expertise in development, design and manufacturing of cables, system products and cable accessories, we guarantee the top quality that you demand for.

**You can always rely on quality from LAPP – wherever you are in the world.**

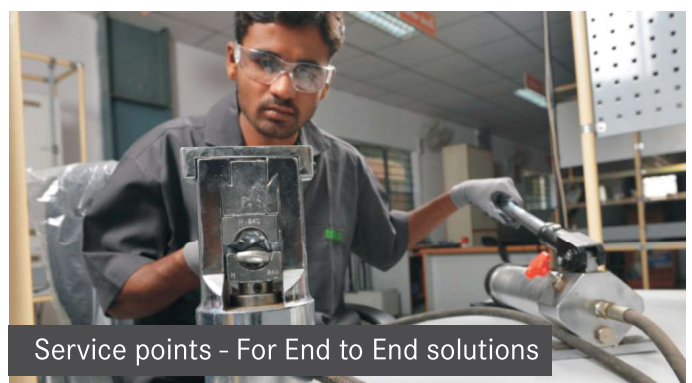
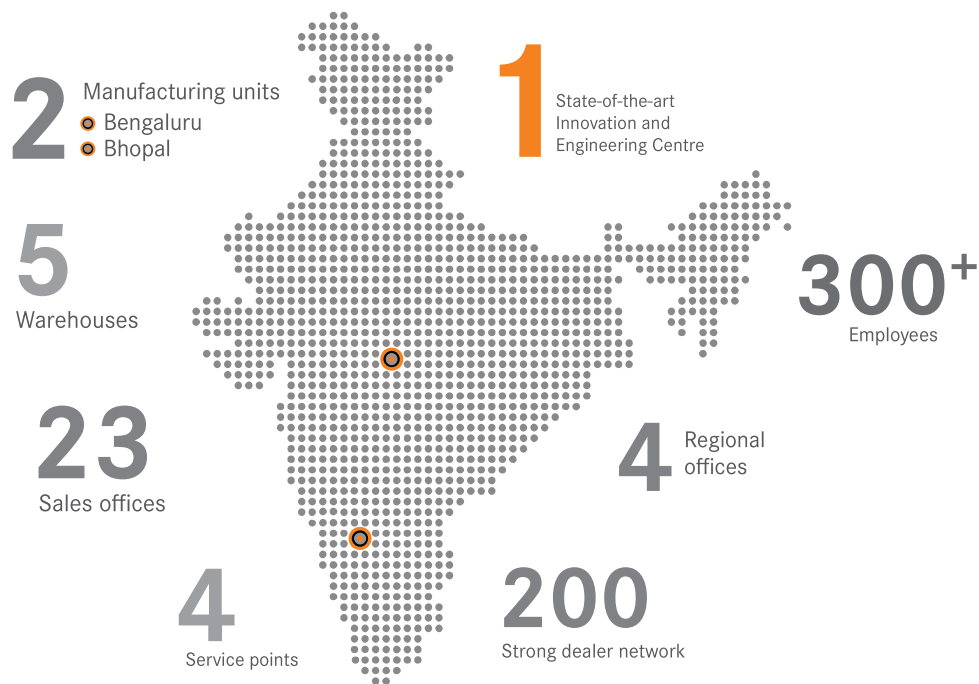


# RELIABLY CONNECTING INDIA

LAPP is the first multinational cable manufacturer to set up operations in India in 1996. Today, we have two manufacturing facilities in India at Bengaluru and Bhopal. Our facilities manufacture both single and multi-core power and control cables, and instrumentation and data cables. Apart from cables, we also manufacture and supply connectors, glands, conduits and cable accessories. Our highly flexible and robust cables for power, control and data application are used across various industry segments such as automation, oil & gas, automotive, railways, metro, machine tools, renewable energy, textile, building and infrastructure. With our impeccable quality and reliability, we are definitely the right partner for all your cabling and connectivity needs.

Our new entity, **ÖLFLEX® SOLUTIONS LLP**, has been created to drive focus on plug-n-play system solutions. The entity strives to offer end-to-end customised solutions to meet customers' requirements. Our global footprint further ensures that we have standardised, high quality solutions besides in-house consultation.

We have over 8500 customers and a channel partner network of 200+ to ensure product availability, anytime, anywhere. The principles that drive us are innovation and customer centricity. Our end goal is to create a hassle-free and delightful purchase experience for our customers.





# OUR BRANDS

## Uncompromising quality – worldwide



**ÖLFLEX®**  
Power and control cables

ÖLFLEX® has become synonymous with power and control cables. Our flexible and oil-resistant cables satisfy the highest demands and can withstand even the very toughest conditions.



**UNITRONIC®**  
Data communication systems

Our high-quality UNITRONIC® data network cables and field bus components provide a forward-looking solution for all applications in industrial machinery and plant engineering. From transmission of simple control signals to field bus signals in complex network structures – we offer a dependable cabling and connection solution for almost every situation.



**ETHERLINE®**  
Data communication systems for ETHERNET technology

Our ETHERLINE® branded products open up a secure, fast and reliable path to the future of Ethernet applications, e.g. PROFINET®. The systems are made up of durable and robust cables and connection components for passive and active network technology, and deliver an effective solution for almost any application, particularly in an industrial environment.



**HITRONIC®**  
Optical transmission systems

HITRONIC® fibre optic cables make transmitting large data volumes easy: fault free, bug proof and at almost light speed. Even electromagnetic radiation does not interfere with the transmission. The HITRONIC® range includes the ideal solution for indoor or outdoor use, for demanding conditions, and even for use in power chains.



**EPIC®**  
Industrial connectors

EPIC® industrial connectors can be found everywhere in industrial machinery and plant engineering, for measuring, control and drives. EPIC® is a flexible system of housings, inserts and contacts: all extremely robust, absolutely safe and simplicity itself to assemble.



**SKINTOP®**  
Cable glands

Simply feed in the cable and twist. That's it. Our SKINTOP® cable glands provide secure connections in no time. The universal systems are simple but effective. They secure and centre the cable, hermetically seal it and guarantee optimum strain relief.



**SILVYN®**  
Protective cable conduit systems and cable carrier systems

The universal range of SILVYN protection and guidance systems protect cables effectively against dust, moisture, mechanical, thermal and chemical influences. The versatile SILVYN CHAIN range of energy supply chains also protects and guides cables in dynamic applications.



**FLEXIMARK®**  
Marking systems

The requirement: permanent marking. The solution: FLEXIMARK®. These sophisticated systems mean that a clear overview inside a control cabinet is no longer just a pipe dream. From simple labels for manual marking through to electronic markings, the FLEXIMARK® range is guaranteed to be permanent.

# ÖLFLEX® CONNECT

## SYSTEM SOLUTIONS MADE BY LAPP

Whether you need custom cable assemblies, servo cable assemblies for motion application or a populated cable chain, we have one-stop solutions for all your cable systems requirements. With **ÖLFLEX® CONNECT**, we complete the step from being a component supplier to a system supplier, offering complete solutions from a single source. We are constantly expanding our engineering, production and assembly capacities around the world.

LAPP's long standing expertise in designing and building a wide range of cable assemblies and our extensive product range combine to offer a wide scope of benefits:

- **No capital expenditure**

Avoid investing in your own production facilities

- **Reduced inventory**

No need to carry stocks of connectors, cables, conduits and hoses. Avoid component scrap or waste from cutting cable

- **Technical expertise**

Make use of LAPP's decades of cabling technology expertise. Rest assured for reliability and safety from uncompromising brand products.

- **Less operating expenditure**

Benefit from a simplified supplier base – LAPP supplies all cable connectivity components from a single source

- **Highest scalability**

With LAPP, you are able to respond to increases in demand immediately. Working with LAPP, you support machine development and serial production – one supplier for individual pieces to whole series

- **Uncompromising brand quality**

High quality products for maximum reliability and safety



### ÖLFLEX® CONNECT CABLES

Cable Systems made by LAPP



### ÖLFLEX® CONNECT SERVO

Servo Systems made by LAPP



### ÖLFLEX® CONNECT CHAIN

Chain Systems made by LAPP





## ABOUT BUILDINGS

With cities growing at a rapid scale, the demand for smart buildings is increasing too - whether residential or commercial. The demand for well-connected and modern residential and commercial complexes is now skyrocketing. With the IT sector, service industry and new age start-ups booming, many global companies have now started operations in India. The need of the hour is reliable wires and cables not only for different types of power transmissions such as electricity, data, and security but also for modern, smart buildings with intelligent lighting, HVAC and more.

**Cables used:** Low Voltage Wires & cables, flexible & armoured for lighting & power connections within buildings, shielded INSTRUM/ Fire Alarm & Fire Survival to connect critical equipments like Fire alarms, annunciator panels, HVAC , DATA & Category cables offering low capacitance transmission for BMS / IT infrastructure.

**Characteristics:** Low flame propagation, low smoke emissions, low generation of corrosive and toxic gases , fire survival , low capacitance data transmission, Electro Magnetic Compatibility (EMC) , Lead free etc are few important characteristics necessary for the building infrastructure segment. Fire Survival (FS) cables , FRLS , Halogen Free wires & Cables are used in wiring applications in critical life safety systems (e.g. commercial building management systems, emergency lightings, standby power supplies, lifts & elevators) in public buildings such as Hotels, Hospitals, Multistoried office complexes, Data centres, Shopping Malls etc . Lead Free (RoHS) wires & cables combined with Zero Halogen properties perfectly compliment the requirements for Green & Safe buildings.

**Industry and Applications:** Given below are key applications for industries where cabling plays an important role



### Residential Projects

Low smoke (HFFR/FR-LSH), flame retardant wire & cables, RG cables for CATV, FA systems, LAN cables, protective conduits



### IT/ITeS

Low Voltage side wire & cables (FR-LSH, HFFR & fire survival), HVAC, FA system, RG cable for CATV, LAN cables, protective conduits



### Hospitality & Healthcare

Low smoke wire & cables (HFFR & fire survival), HVAC, FA system, RG cable for CATV, LAN, speaker cables, protective conduit



### Green Buildings

Low Smoke , Lead free (RoHS) , Zero Halogen Wires & Cables , Fire Survival Cables for building wiring, power systems, FA system, Solar PV Cables , RG cable for CATV, LAN, speaker cables, protective conduits

## ÖLFLEX® INFRA FR

ISI marked IS 694:2010 approved 1100 V rated cable

### FLAME RETARDANT SINGLE CORES

LAPP KABEL STUTTGART ÖLFLEX® INFRA (CM/L No)  IS 694 FR



#### PRODUCT FEATURES

- Flame retardant
- High drawability and uniform insulation
- Good adhesion between conductor and insulation

#### APPLICATION RANGE

- Building wire for installation on wall surface or in concealed conduits
- For lighting & power applications in buildings-residential, commercial complex & IT parks



## ÖLFLEX® INFRA FR-LSH

ISI marked IS 694:2010 approved 1100 V rated cable

### FLAME RETARDANT LOW SMOKE AND LOW HALOGEN SINGLE CORES

LAPP KABEL STUTTGART ÖLFLEX® INFRA (CM/L No)  IS 694 FR-LSH



#### PRODUCT FEATURES

- Flame retardant
- Low toxicity, low smoke and low halogen
- High drawability and uniform insulation
- Good adhesion between conductor and insulation

#### APPLICATION RANGE

- Building wire for installation on wall surface or in concealed conduits
- For lighting & power applications in buildings-residential, commercial complex, hotels, hospitals & IT parks



## ÖLFLEX® INFRA HFFR Z

Halogen free ISI marked IS17048:2018 approved 1100 V rated cable

### HALOGEN FREE FLAME RETARDANT SINGLE CORES

LAPP KABEL STUTTGART ÖLFLEX® INFRA HFFR Z 4.0 sq.mm



#### PRODUCT FEATURES

- Halogen free flame retardant
- Low Smoke, Low Toxicity and Low Corrosivity
- High drawability and uniform insulation
- Good adhesion between conductor and insulation

#### APPLICATION RANGE

- Building wire for installation on wall surface or in concealed conduits
- For lighting & power applications in buildings-residential, commercial, hotels, hospitals & IT parks





## ÖLFLEX® 100 I FR/FR-LSH/HFFR Z

ISI marked IS 694:2010 & 17048:2018 approved  
1100 V rated cable

### MULTI CORE POWER CABLES

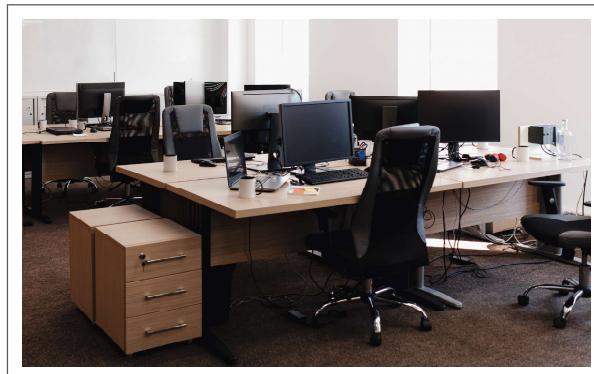


#### PRODUCT FEATURES

- Flame retardant
- Low Smoke (FRLSH version)
- Low Toxicity (HFFR Version)
- Excellent Stripability

#### APPLICATION RANGE

- Main power circuit from metering room to individual apartments
- For workstation cabling in IT/ ITES office
- Power circuit for air conditioning installations
- Dry or damp interiors under medium mechanical load conditions
- Fixed installation



## ÖLFLEX® 100 I SY

Steel wire braided cable for extra mechanical protection  
1100 V rated cable

### STEEL WIRE BRAIDING FOR EXTRA MECHANICAL PROTECTION



#### PRODUCT FEATURES

- Flame retardant: according to IEC 60332-1
- Sharper bending radius as compared to armoured cables
- Flexible armoured

#### APPLICATION RANGE

- For fixed and occasional moving installation
- Plant engineering and installation
- Power circuit for air conditioning installations
- Main power circuit to individual apartments
- Area with high mechanical stress



## ÖLFLEX® POWER LV

Heavy duty cable acc. to IS 1554 and IS 7098

### SINGLE & MULTI CORE POWER CABLE FOR HEAVY DUTY



#### PRODUCT FEATURES

- Available in FR, FR-LSH
- Available in both armoured and un-armoured
- Heavy duty & suitable for fixed installation

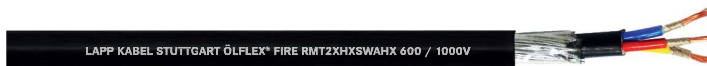
#### APPLICATION RANGE

- Power cable ideally required for electric power transmission and distribution (LV)
- Buried installation (armoured)



## ÖLFLEX® FIRE

Fire survival according to BS 7846 with 1100 V rated cable



### PRODUCT FEATURES

- Conforming to fire survival test of BS6387 CWZ category
- Available in different construction variants power, control and instrumentation application
- Anti rodent & UV resistant inner/outer sheath optional

### APPLICATION RANGE

- Basement ventilation, emergency lighting, staircase ventilation, PA systems in Residential and commercial buildings that require electrical circuit integrity in the event of a fire.

## FIRE SURVIVAL CABLES



## RG 6 CABLE

Coaxial cable for CATV application



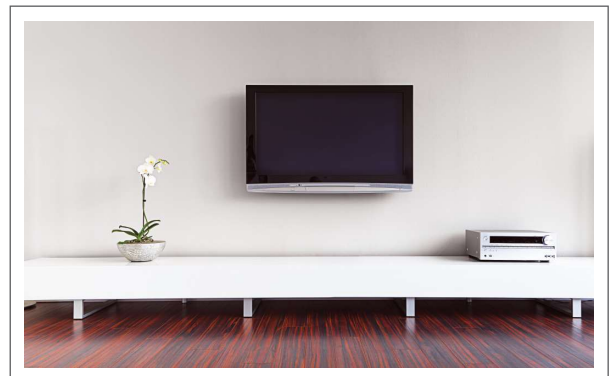
### PRODUCT FEATURES

- Conductor copper clad steel wire
- Foam polyethylene, low dielectric constant
- 1<sup>st</sup> shielding bonded aluminium foil, 100% coverage
- 2<sup>nd</sup> shielding braided aluminium wire, min. 60% coverage

### APPLICATION RANGE

- Suitable for 75 ohm drop cable/data transmission, for CATV installation in buildings

## COAXIAL CABLES



## CAT 6

LAN cable for home automation



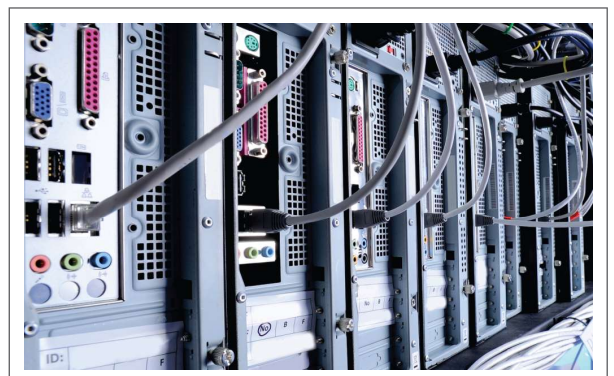
### PRODUCT FEATURES

- CAT 6 Cables meet requirements in accordance with EIA/TIA 568
- Transfer of digital and analogue data signals
- CAT 6 cables are specified for 250 MHz transmission

### APPLICATION RANGE

- Transmission of high speed data, digital & analog voice & video signals on LAN. Transmission rate of 250 MHz.
- Data transfer for cable tv, telephone, video door & cctv
- Most suitable for home automation

## DATA TRANSMISSION CABLES



## FIRE ALARM CABLE

Fire alarm armoured cable

### FIRE ALARM CABLE

LAPP KABEL® 2x1.5 R2XY2SWAYC2 UV 1 RD

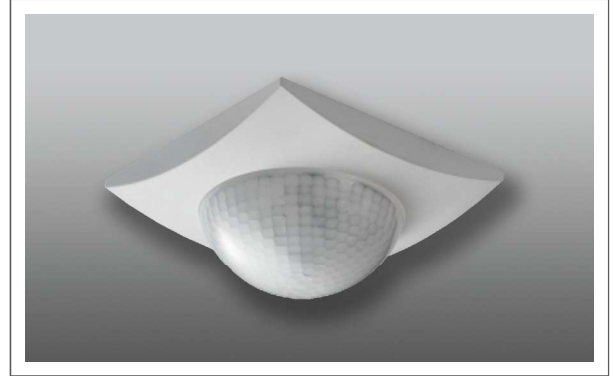


#### PRODUCT FEATURES

- Reduced smoke according to ASTM D 2843
- XLPE insulation - better current carrying capacity
- Armoured – increased mechanical properties
- Annealed tinned copper conductor version available for application in corrosive atmospheres

#### APPLICATION RANGE

- Smoke detection system
- Conduits or in trays
- For industrial & commercial buildings & complexes



## UNITRONIC® ST

### SPEAKER CABLE

Low frequency data transmission metal foil screened pair cable



#### PRODUCT FEATURES

- 100% screen coverage, offers optimum protection against external interference at medium and high frequencies
- Flame retardant
- Customized variance possible

#### APPLICATION RANGE

- Speaker controls
- For use in dry and damp environment



## UNITRONIC® BUS EIB / KNX

Cable Characteristic impedance: 75 ohm

### DATA COMMUNICATION SYSTEMS



#### PRODUCT FEATURES

- Serial data transmission
- Cable has been tested at 4 kV (1 min.) in a water bath

#### APPLICATION RANGE

- The cable is designed for use in building management, e.g. for decentralised control of lighting, heating, air conditioning, ventilation, energy management, blinds, locking systems, etc
- The cable can be laid in pipes, conduits in dry, damp or wet environments



## SILVYN® AS

Helically-wound galvanized steel protective conduit with interlocked profile

### HELICALLY-WOUND, ONE-HOOKED METAL CONDUITS



#### PRODUCT FEATURES

- High tensile
- High crush-resistance
- Flexible

#### APPLICATION RANGE

- Application with high mechanical stress
- Available in diameter upto 51 mm



## SILVYN® US-M

Nickel-plated brass conduit fitting that offers IP40 / IP54 / IP66 protection

### NICKEL-PLATED BRASS CONDUIT FITTING



#### PRODUCT FEATURES

- High tensile, high crush-resistance & flexible
- Heat resistance up to +220°C
- IEC EN 61386-23

#### APPLICATION RANGE

- In combination with protective conduit: SILVYN® AS/AS-P/EDU-AS/EMC AS-CU
- Dimensionally stable
- Available in diameter upto 51 mm



## SKINDICHT® SM-M

Metric counter nuts for through-holes on thin-walled housings

### METRIC THREADED, STAINLESS STEEL COUNTER NUT



#### PRODUCT FEATURES

- Good chemical resistance
- Mechanical resistance

#### APPLICATION RANGE

- Used when a gland has to be countered, or in through-holes on thin-walled housings





## SILVYN® US-AS

Nickel-plated brass conduit insert to cover sharp conduit endings

METRIC THREADED, STAINLESS STEEL COUNTER NUT



### PRODUCT FEATURES

- All-round collar completely covers the protective conduit end

### APPLICATION RANGE

- In combination with protective conduits  
SILVYN® AS
- Conduit end cover



## SILVYN® RILL PA 6

Classic parallel corrugated conduit that offers best protection due to its structure and versatile accessories

CORRUGATED CONDUIT FOR VARIOUS APPLICATION



### PRODUCT FEATURES

- Halogen-free, UV resistant
- Abrasion-resistant, dimensionally stable
- Highly flexible
- Good flame retardant, zero dripping UL 94 V-0

### APPLICATION RANGE

- Outdoor application
- Commercial complexes, airports, ship ports, transport hubs
- Available in diameter upto 48 mm



## SILVYN® KLIK-M / KLIK PG / KLIK NPT

Metric conduit fitting for SILVYN® RILL

METRIC END FITTING CONDUIT FITTING



### PRODUCT FEATURES

- Fast assembling & disassembling
- High sealing performance
- Can be rotated

### APPLICATION RANGE

- End termination
- In combination with SILVYN® RILL PA6
- Outdoor use



## SILVYN® KLINK 90° M

Metric threaded conduit fitting for SILVYN® RILL

### 90° ELBOW METRIC CONNECTION END FITTING



#### PRODUCT FEATURES

- 90° elbow allows easy installation
- High sealing performance

#### APPLICATION RANGE

- For applications with limited space
- Rotating applications



## SILVYN® KLINK-Y

Divider in Y-shape for SILVYN® RILL

### Y-DISTRIBUTOR FOR SILVYN® RILL CONDUITS



#### PRODUCT FEATURES

- Easy combination of different conduit sizes

#### APPLICATION RANGE

- Y-distributor for SILVYN® RILL conduits



## SILVYN® KLINK-RH

Conduit holder for SILVYN® RILL

### FASTENING OF CONDUITS ON MACHINE WALLS FOR ALL APPLICATIONS



#### PRODUCT FEATURES

- Impact-resistant polyamide
- One-piece conduit holder
- Suitable for mounting onto a C-profile rail

#### APPLICATION RANGE

- Fastening of conduits on machine walls for all applications



## CONDUCTOR END SLEEVES AHK INSULATED

For cable end termination, according to DIN or German colour code, halogen-free

### THICK INSULATION CABLE END SLEEVE

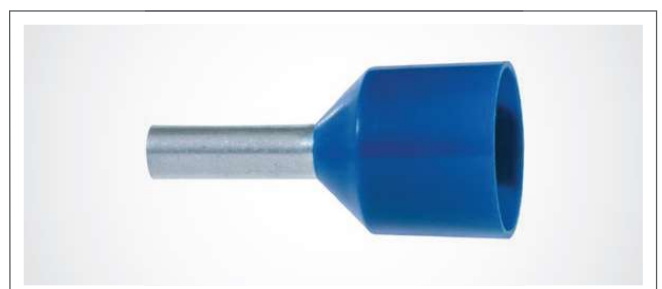


#### PRODUCT FEATURES

- Funnel-shaped opening makes it easy to slip them onto the stranded conductor
- The conductor is firmly connected to the collar by crimping

#### APPLICATION RANGE

- Control cabinets and equipment wiring
- For cables with class 2, 5 and 6 conductors
- Not suitable for solid conductors



## INSULATED CABLE LUGS

Easy-Entry (ring cable lugs, (narrow) fork cable lugs, flange fork cable lugs, pin cable lugs, circular connector, connector sleeve butt connector, end joint)

### PRODUCT FEATURES

- Hard-soldered cable lug that can be pressed in any position
- Electrolytic tinning for max. corrosion protection
- Metal sleeves with internal corrugation

### APPLICATION RANGE

- Manufacturing of control cabinets and equipment

## METAL SLEEVES WITH INTERNAL CORRUGATION



## BASIC TIE CABLE TIE

The basic series of the cable tie portfolio

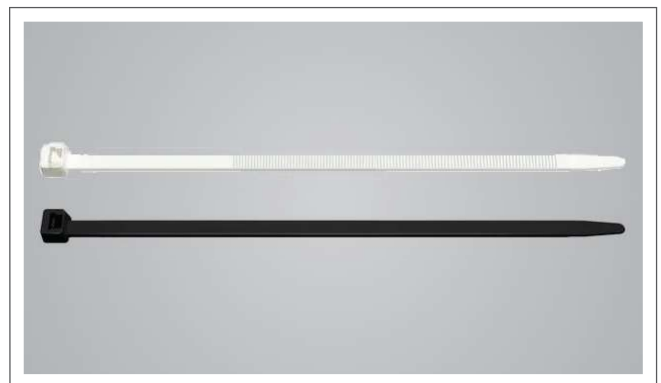
### PRODUCT FEATURES

- High resistance to bases, oils, greases, oil derivatives and aromatic solvents
- UV-resistant (black version)

### APPLICATION RANGE

- Multipurpose cable tie for many applications

## MULTIPURPOSE CABLE TIE FOR MANY APPLICATIONS



## STAR STRIP STRIPPING TOOL

Stripping tool for cable diameters up to 40 mm, interchangeable hooks, reliable and durable, special polished knives for problematic insulation as PTFE, TPE, fluoropolymere and PUR

### PRODUCT FEATURES

- Adjustable blade for controlling depth of cut
- Specific locking positions for circular, longitudinal or spiral cuts
- Blade automatically returns to its start position at the end of a stripping process, thus reducing the possibility of breaking the blade
- No special tool is required to interchange the hook

### APPLICATION RANGE

- Adjustable stripping tool for round cables made with various insulation materials (as PVC, PTFE, rubber or PUR)
- Through the interchangeable hooks, the tool can be used for cables with a diameter of 4.5 - 25 mm and 20 - 40 mm

## ADJUSTABLE STRIPPING TOOL FOR ROUND CABLES



# ELECTRICAL TABLE

## Electrical Data for ÖLFLEX® Power LV

Nominal Cross Sectional Area (Sq mm)	Nominal Thickness of XLPE Insulation (mm)	Unarmoured			Armoured				Mas DC Conductor Resistance at 20 deg C (Ohm/Km)	AC Current Rating		Short Circuit Current for 1 Sec (KA)
		Nom Thickness of Outer Sheath (mm)	Approx Overall Dia (mm)	Approx Cable Weight (Kg/Km)	Steel Arm Size (mm)	Min Thickness of Outer Sheath (mm)	Approx Overall Dia (mm)	Approx Cable Weight (Kg/Km)		In AIR @ 40 deg C (Amps)	In GND @ 30 deg C (Amps)	
2 Core Cables												
1.5	0.7	2	11	170	1.4 (W)	1.24	13	372	12.1	29	33	0.21
2.5	0.7	2	12	205	1.4 (W)	1.24	14	430	7.41	39	43	0.36
3 Core Cables												
1.5	0.7	2	11.5	191	1.4 (W)	1.24	14	417	12.1	23	25	0.21
2.5	0.7	2	12	236	1.4 (W)	1.24	15	485	7.41	31	34	0.36
4	0.7	2	13	299	1.4 (W)	1.24	16	571	4.61	41	45	0.57
6	0.7	2	15	383	1.4 (W)	1.24	17	689	3.08	52	56	0.86
10	0.7	2	17	540	1.4 (W)	1.4	19.5	913	1.83	70	74	1.40
16	0.7	2	19.5	672	4x0.8 (Strip)	1.4	21	983	1.15	89	95	2.30
25	0.9	2	22	986	4x0.8 (Strip)	1.4	23	1325	0.727	119	122	3.60
35	0.9	2	24	1281	4x0.8 (Strip)	1.4	25	1642	0.524	147	146	5.00
50	1.0	2	26	1656	4x0.8 (Strip)	1.4	27	2065	0.387	179	173	7.10
70	1	2	30.5	2329	4x0.8 (Strip)	2	31.5	2809	0.268	226	212	10.00
95	1	2	35.5	3133	4x0.8 (Strip)	1.56	36.5	3707	0.193	279	254	13.60
120	1	2	37	3832	4x0.8 (Strip)	1.56	38	4454	0.153	320	287	17.10
150	1	2	41	4712	4x0.8 (Strip)	1.72	42	5382	0.124	365	321	21.40
185	2	2	44.5	5838	4x0.8 (Strip)	2	46	6625	0.0991	422	362	26.40
240	2	3	49	7530	4x0.8 (Strip)	2	50	8342	0.0754	500	418	34.30
4 Core Cables												
1.5	0.7	2	12.5	223	1.4 (W)	1.24	14.5	459	12.1	23	25	0.21
2.5	0.7	2	13.5	276	1.4 (W)	1.24	15.5	536	7.41	30	34	0.36
4	0.7	2	14.5	360	1.4 (W)	1.24	17	655	4.61	41	45	0.57
6	0.7	2	16	465	1.4 (W)	1.24	18.5	794	3.08	52	56	0.86
10	0.7	2	18.5	664	4x0.8 (Strip)	1.4	19.5	950	1.83	70	74	1.40
16	0.7	2	20.5	853	4x0.8 (Strip)	1.4	21.5	1169	1.15	89	95	2.30
25	0.9	2	24	1256	4x0.8 (Strip)	1.4	25	1617	0.727	119	122	3.60
35	0.9	2	25.5	1635	4x0.8 (Strip)	1.4	26.5	2044	0.524	147	146	5.00
50	1	2	28	2131	4x0.8 (Strip)	1.56	29.0	2588	0.387	179	173	7.10
70	1.1	2	32.5	3001	4x0.8 (Strip)	1.56	33.5	3530	0.268	226	212	10.00
95	1.1	2	35.5	4022	4x0.8 (Strip)	1.56	36.5	4596	0.193	279	254	13.60
120	1.2	2	39	4972	4x0.8 (Strip)	1.72	40.5	5659	0.153	320	287	17.10
150	1.4	2	43.5	6123	4x0.8 (Strip)	1.72	44.5	6840	0.124	365	321	21.40
185	1.6	3	48.5	7667	4x0.8 (Strip)	2	50	8480	0.0991	422	362	26.40
240	1.7	3	54	9915	4x0.8 (Strip)	2.04	54.5	10795	0.0754	500	418	34.30
300	1.8	3	59.5	12364	4x0.8 (Strip)	2.2	60	13336	0.0601	574	469	42.90



## TECHNICAL TABLE

### ÖLFLEX® INFRA FR / FRLSH / HFFR Wires

Nominal Cross sectional Area of conductor Sq. mm	Number / Nominal Dia of Wire mm ambient temperature	Max. Overall Dia (mm)	Current carrying capacity in air at 40 °C (in Amps)	DC Resistance max at 20 °C
1.0 sq mm	32/0.2	2.6	17	19.5
1.5 sq mm	30/0.25	3	22	13.3
2.5 sq mm	50/0.25	3.6	29	7.98
4.0 sq mm	56/0.3	4.25	36	4.95
6.0 sq mm	84/0.3	4.8	48	3.3
10.0 sq mm	76/0.4	6.2	70	1.91
16.0 sq mm	119/0.4	7.2	77	1.21

Note : Higher cross sections also available subject to minimum order quantity

### RG 6 CABLE

Freq	Insertion Loss	Freq	Insertion Loss
MHz	Max [dB/100m]	MHz	Max [dB/100m]
5	2.20	450	14.2
55	5.24	550	15.5
211	9.42	750	18.5
270	10.7	870	20.0
300	11.3	1000	22.9
400	13.3		

### ETHERLINE® CAT6

Freq	Insertion Loss	Return Loss	NEXT	PS NEXT	ACR	PS ACR	ELFEX (ACR-F)	PS EL-ELFEX (PS ACR-F)
MHz	Max [dB/200m]	[dB]	[dB]	Min [dB]	Min [dB]	Min [dB]	Min [dB]	Min [dB]
1	2.0	20.0	74.3	72.3	72.3	70.3	67.8	64.8
4	3.8	23.0	65.3	63.3	61.5	59.5	55.8	52.8
8	5.3	24.5	60.8	58.8	55.4	53.5	49.7	46.7
10	6.0	25.0	59.3	57.3	53.3	51.3	47.8	44.8
16	7.6	25.0	56.2	54.2	48.6	46.6	43.7	40.7
20	8.5	25.0	54.8	52.8	46.3	44.3	41.8	38.8
25	9.5	24.3	53.3	51.3	43.8	41.8	39.8	36.8
31.25	10.7	23.6	51.9	49.9	41.2	39.2	37.9	34.9
62.5	15.4	21.5	47.4	45.4	32.0	30.0	31.9	28.9
100	19.8	20.1	44.3	42.3	24.5	22.5	27.8	24.8
200	29.0	18.0	39.8	37.8	10.8	8.8	21.8	18.8
250	32.8	17.3	38.3	36.3	5.5	3.5	19.8	16.8

# TECHNICAL TABLE

## ÖLFLEX® 100 I / 100 I SY

	Cable Diameter Approx. mm (Nominal)		Cable weight approx. Kg/Km			
No. of Cores x Cross Section (Amps)	(ÖLFLEX® 100 I)	(ÖLFLEX® 100 I SY)	(ÖLFLEX® 100 I)	(ÖLFLEX® 100 I SY)	DC Resistance Max. at 20degC Ohm/Km	Current carrying capacity @ 40 deg C in AIR (A)
2 x 1.5	8.10	10.60	90	165	13.30	18
3 x 1.5	8.60	11.10	108	190	13.30	16
3G 1.5	8.60	11.10	108	190	13.30	16
4 x 1.5	0.60	11.90	137	220	13.30	16
5 x 1.5	10.40	13.00	162	252	13.30	16
2 x 2.5	9.50	12.20	126	220	7.98	24
3 x 2.5	10.00	12.80	159	260	7.98	22
4 x 2.5	11.10	14.20	198	310	7.98	22
5 x 2.5	12.10	15.40	238	360	7.98	22
3 x 4	11.80	14.40	241	365	4.95	25
4 x 4	13.00	15.70	297	440	4.95	25
5 x 4	14.30	17.20	360	530	4.95	25
3 x 6	13.50	15.90	320	470	3.30	35
4 x 6	14.80	17.30	415	575	3.30	35
5 x 6	16.20	19.00	510	685	3.30	35
2 x 10	15.50	18.50	380	580	1.91	58
3 x 10	16.70	19.70	550	710	1.91	51
4 x 10	18.40	21.80	675	885	1.91	51
5 x 10	21.00	24.00	815	1,050	1.91	51
3 x 16	19.10	22.60	754	980	1.21	55
4 x 16	21.00	25.20	945	1,210	1.21	55
5 x 16	23.00	27.80	1,160	1,480	1.21	55
3 x 25	22.70	28.00	1,190	1,480	0.78	73
4 x 25	25.50	30.80	1,510	1,860	0.78	73
5 x 25	30.50	33.60	1,850	2,250	0.78	73
3 x 35	25.50	30.10	1,520	1,870	0.554	89
4 x 35	28.50	33.50	1,930	2,345	0.554	89
5 x 35	33.50	37.80	2,300	2,850	0.554	89
3 x 50	31.00	35.60	2,180	2,600	0.386	117
4 x 50	34.00	39.60	2,740	3,260	0.386	117

Note : Higher cross sections also available subject to minimum order quantity



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